

Serial No: 09/718,295

## AMENDMENTS

### Amendments to the Specification

Please replace the paragraph beginning on page 24, line 17 with the following amended paragraph:

In preferred embodiments, the goal of probe selection step is to find the best probes to represent a sequence. The probe selection software module takes a set of probes and a set of quality measures for each probe. It then implements an optimization algorithm to find the best n probes, spread out across the gene. Methods for probe selection using optimization algorithm is described in U.S. Provisional Application Serial Number 09/745,965-60/252,617 (currently inactive), filed concurrently herewith and incorporated herein by reference in its entirety for all purposes.

Please replace the paragraph beginning on page 19, line 8 with the following amended paragraph:

where  $W_i = C_i P_i$ . The following is a linear regression model for probes of N bases in length using a training data set that contains intensity values of M probes.

$$Ln(I_1) = W_1 S_{11} + W_2 S_{21} + \dots W_{3N} S_{3N1}$$

$$Ln(I_2) = W_1 S_{12} + W_2 S_{22} + \dots W_{3N} S_{3N2}$$

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$$Ln(I_M) = W_1 S_{1[M]M} + W_2 S_{2[M]M} + \dots W_{3N} S_{3N[M]M}$$